EPI-LOG

Communicable Disease and Epidemiology News

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Tuberculosis in King County: Part 1

In 2005, King County reported 127 cases of active tuberculosis (TB) disease. This represents a 5 percent decrease from the 2004 count and marks a continued decline since 2002 when 158 TB cases, a 30-year historic high, were reported. Between 2002 and 2005, several new TB control efforts were initiated:

- a nurse case management model was introduced, with five teams consisting of public health nurses and outreach workers providing individualized and direct patient care;
- enhanced partnerships with public health agencies and the private sector resulted in the increase in the proportion of patients receiving directly observed therapy and case management;
- a focused yet thorough approach to contact investigations was recently initiated, with a team of two epidemiologists and two disease intervention specialists conducting screenings, and collecting, managing and analyzing data for over 1,000 contacts a year.

In King County, TB continues to disproportionately affect the foreign-born, who represented 95 cases reported in 2005. King County's TB rate (7.0 per 100,000 population) remains higher than the national rate (4.8 per 100,000).

Age, Race, Ethnicity and Nativity

TB case rates vary by factors such as age, race, ethnicity and country of origin. The largest decline in case rates among age groups occurred among 15-24 year-olds, where rates declined from 12.2/100,000 in 2004 to 7.0/100,000 in 2005. The TB case count among children 0-14 years was four. Blacks (37.0/100,000) and Asians (24.5/100,000) had disproportionately higher rates of TB. In 2005, 75 percent of reported cases occurred among foreign-born persons, similar to the 2004 proportion. The highest case numbers came from Vietnam, Ethiopia, the Philippines, Somalia and Mexico.

TB-HIV Co-infection

HIV is a significant risk factor for TB. There were seven TB cases among HIV infected persons in King County, representing 5.5 percent of all TB cases reported in 2005. This represents an increase from 2004, but is consistent with proportions from previous years (years 2001–2003). The proportion of cases offered HIV testing in King County has improved from 85 percent to 99 percent over the past five years.

Drug Resistant TB

In 2005, 15 percent of TB cases were resistant to at least one TB medication in King County. Ten percent of all TB cases exhibited primary resistance to isoniazid (INH) in 2005. Multi-drug resistant TB (MDR-TB: TB resistant to at least isoniazid and rifampin, the most effective TB medications) is exceedingly costly and difficult to treat. In 2005, two cases (2 percent of cases) of MDR-TB were reported.

TB Treatment

The proportion of TB patients initially placed on a standard four-drug regimen continues to remain above 90 percent. The proportion of patients who were treated with directly observed therapy has increased from 61 percent in 2001 to 99 percent in 2004, the latest year with available outcome data.

Summary

The program continues to face many ongoing challenges, such as (1) the high proportion of TB patients who live in poverty and who have special needs in respect to and acculturation, and (2) the transient and migratory nature of many individuals at high risk for TB.

Because of a large pool of individuals with latent TB infection (estimated 100,000 people in King County, and a third of the world's population), lack of convenient preventive medications, and lack of an effective TB vaccine, it is unlikely that TB will be eliminated anytime soon. To manage this disease with the tools currently available, the TB Control Program focuses on (1) case management of patients with active TB disease in order to ensure the cure of all TB cases, stop further transmission of TB and prevent development of multi-drug resistant TB; (2) timely and thorough contact investigations around active TB cases to identify, evaluate and treat those who were exposed and recently infected and (3) efforts to enhance targeted TB testing and treatment of latent TB infection.

Next Month

Next month the *EPI-LOG* will focus on the important role that King County health care providers play in the control of TB in our community. In the meantime, please continue to consider tuberculosis in the evaluation of persons with persistent cough, fever, weight loss, and other persistent undiagnosed symptoms, and call the TB Control Program at (206) 731-3954 to report any newly suspected cases.

IMPORTANT NOTICE for King County Healthcare Providers

Public Health – Seattle & King County needs to reach healthcare providers in the event of an emergency. All actively licensed healthcare providers in King County are requested to register with the Public Health Information & Alert Network (IAN). By registering, Public Health will be able to send information on events of public health significance in the community, including pandemic influenza, emerging outbreaks, emergency information for clinicians, health advisories, recommendations and updates.

Letters requesting provider participation have been mailed. If you have not received a letter or need help registering, please send an email to: PHSKC_CDEPI@METROKC.GOV. Include the words "SUBSCRIBE IAN" in the subject line. In the body of your message, include your name, profession, and license number. If you do not have access to email, please call 206-296-4774 for assistance.

Leptospirosis Alert

With the advent of the rainy season, Public Health is beginning to receive reports of canine leptospirosis cases again. So far this winter, one confirmed, and two probable canine leptospirosis cases have been reported. The latter two cases were classified as probable because they cases died before they could mount an antibody response that would have confirmed leptospirosis as the cause of death. In view of the high number of local canine cases during the 2005-06 winter (55 cases, including 20 fatal), health care providers should be alert for human cases. Leptospirosis is likely under diagnosed in the U.S. due to lack of clinical suspicion and the variety of clinical manifestations.

Leptospirosis in humans can cause a spectrum of illness from subclinical to serious life-threatening disease. Up to 90 percent of patients have mild self-limited disease. Common symptoms include fever, chills, severe headache, myalgia, and conjunctival injection. In some cases the illness is biphasic with onset of severe symptoms lasting up to a month after a brief period of apparent recovery. This phase include fever, meningitis, rash, hemolytic anemia, hepatorenal failure (Weil's disease), jaundice, mental confusion and depression, myocarditis and pulmonary involvement with or without hemoptysis. Leptospirosis is most commonly diagnosed by seroconversion or $\geq$ 4-fold increase in antibody titers. Confirmatory diagnosis is done at the Centers for Disease Control and Prevention using the microscopic agglutination test.

Please report cases of leptospirosis within 3 working days by calling 206-296-4774. Public Health can arrange for confirmatory diagnosis. Please report animals with leptospirosis to the Public Health Veterinarian at 206-296-4880. Additional information is available at: www.metrokc.gov/health/providers/epidemiology/leptospirosis-hcp.pdf

Disease Reporting

AIDS/HIV	(206) 296-4645
STDs	(206) 731-3954
TB	(206) 731-4579
All Other Notifiable Communicable Diseases (24 hours a day)	(206) 296-4774
Automated reporting line for conditions not immediately notifiable	(206) 296-4782

Hotlines

Communicable Disease	(206) 296-4949
HIV/STD	(206) 205-STDS

Reported Cases of Selected Diseases, Seattle & King County 2006

	Cases Reported in October		Cases Reported Through October	
	2006	2005	2006	2005
Campylobacteriosis	22	26	226	285
Cryptosporidiosis	7	2	36	61
Chlamydial infections	368	378	4,270	4,568
Enterohemorrhagic *E. coli* (non-O157)	0	0	2	6
***E. coli* O157: H7**	2	7	35	34
Giardiasis	13	21	100	129
Gonorrhea	148	136	1,637	1,447
***Haemophilus influenzae* (cases <6 years of age)**	0	0	3	2
Hepatitis A	5	1	16	14
Hepatitis B (acute)	2	1	12	18
Hepatitis B (chronic)	71	58	706	584
Hepatitis C (acute)	1	1	7	7
Hepatitis C (chronic, confirmed/probable)	128	160	1,254	1,161
Hepatitis C (chronic, possible)	15	28	231	314
Herpes, genital (primary)	29	66	651	645
HIV and AIDS (including simultaneous diagnoses with AIDS)	29	40	223	311
Measles	0	0	0	1
Meningococcal Disease	2	0	9	13
Mumps	0	0	2	1
Pertussis	4	16	95	246
Rubella	0	0	0	1
Rubella, congenital	0	0	0	0
Salmonellosis	31	19	177	192
Shigellosis	7	11	47	65
Syphilis	12	10	176	131
Syphilis, congenital	0	0	0	0
Syphilis, late	10	2	65	59
Tuberculosis	6	5	119	90

The *EPI-LOG* is available in alternate formats upon request.